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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,438	05/30/2002	Takahiro Nakajima	11197/7	3695

7590 12/08/2004
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EXAMINER

LEE, RIP A

ART UNIT PAPER NUMBER

1713

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,438

Applicant(s)

NAKAJIMA ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on September 21, 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-7, 9, 10, 12, 14-16, 19-21, and 30-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-7, 9, 10, 12, 14-16, 19-21 and 30-41 is/are rejected.
- 7) ☒ Claim(s) 1, 4-7, 10, 12, 14-16, 21, 32, 34, 37 and 38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05052004, 09152004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action follows a response filed on September 21, 2004. Applicants have amended claims 1, 4, 5, 6, 9, 10, 19, 20, and 30-36. Claims 2, 3, 8, 11, 13, 17, 18, and 22-29 were canceled, and new claims 37-41 were added.

Claim Objections

1. Claims 1, 4-7, 10, 12, 14-16, 21, 37, and 38 are objected to because of the following informalities: The term "polyester polymerization" does not make sense because the term polyester has already been polymerized. Rather, the polymerization catalyst is for making polyester. Appropriate correction is required.
2. Claims 5 and 6 are objected to because of the following informalities: Use of the term "provided that" with "may contain" is superfluous. A requisite, or proviso for something that is optional does not make sense in the context of the current claim language. Appropriate correction is required.
3. Claims 12 and 34 are objected to because of the following informalities: These claims depend from a canceled claim. The dependency needs to be changed. Appropriate correction is required.
4. Claim 32 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 9. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 4-6, 9, 10, 19, 30-32, and 37-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,847,873 to Jackson *et al.*

The Jackson *et al.* patent teaches a process for preparing aromatic polyesters in the presence of a catalyst composition comprising a phosphorus compound of formula $X^1X^2(X^3O)P=O$ wherein at least one R group attached to Z is biphenyl (col. 3, line 48). The compounds ethyl *bis*(*p*-biphenyl)phosphinate and poly(diethyl *p*-vinylphenylphosphonate) are exemplary (see Table, entries 3 and 5). The second component of the catalyst is a metallic component which contains aluminum (col. 3, line 56; see also claims 7 and 8). The compound $Al(acac)_3$, where acac is acetylacetonate, is exemplary (Table, entry 6). It can be seen that the phosphorus compound has an aromatic ring structure and the aluminum compound is an aluminum chelate. Although the reference does not show a catalyst containing *bis*(*p*-biphenyl)phosphinate and $Al(acac)_3$ or poly(diethyl *p*-vinylphenylphosphonate) and $Al(acac)_3$, it is deemed that one of ordinary skill in the art would have found it obvious to arrive at such a catalyst because each of these components is disclosed clearly in the Table. One of ordinary skill in the art would have reasonably expected such an obvious combination to produce an effective catalyst for preparing aromatic polyesters.

7. Claims 1, 4-7, 9, 10, 12, 14-16, 19-21, and 30-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/28033 to Ridland *et al.*

Ridland *et al.* teaches a catalyst prepared an orthoester of aluminum, a diol, an organophosphorus compound containing at least one P-OH group, and a base (claim 1). An example of the aluminum orthoester is (*sec*-BuO)₃Al, and the base is NaOH (see Example 12). The resulting organometallic species is used as a polymerization catalyst for making polyester. The organophosphorus compound is selected from phosphates, phosphonates, and phosphinates (page 3, line 20). The reference does not teach specifically use of phosphinate compounds and phosphonate compounds which contain aromatic ring structures, but in view of the fact that use of aryl ring containing phosphorus compounds such as aryl phosphates is also contemplated (page 3, line 23), it is maintained that one having ordinary skill in the art would have found it obvious to use aryl phosphinates and aryl phosphinates. The skilled artisan would have found it obvious to arrive at such an embodiment since it flows naturally from the teachings of the patent, and he would have expected such a catalyst to perform equally well in producing polyester.

Response to Arguments

8. The provisional obviousness-type double patenting rejections set forth in the previous office action remain in force. Applicants have indicated that terminal disclaimers would be submitted when allowable claims are found by the examiner.

9. The rejection of claims under 35 U.S.C. 112, second paragraph, 35 U.S.C. 102(b) and 35 U.S.C. 103(a), set forth in the previous office action, have been overcome by amendment.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information Disclosure Statement

11. Reference CA 2,253,515 was not received. The other references which have been crossed out were not considered because they were cited in a previous information disclosure statement.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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November 23, 2004

TATYANA ZALUKAEVA
PRIMARY EXAMINER

